

# The Arizona Sentinel.

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## WHAT SHE IS NOW.

Her hair is a lovely brown that turns  
To gold when the sunbeams on it flow,  
And fringed with lashes of darker hue,  
A golden brown are her radiant eyes,  
And the milk-white teeth that her smiles  
Disclose.

Are like pearls enshrined in the heart of a  
rose.

As fair as the snow are her helpful hands,  
And her low broad brow, and her slender  
throat,

And she sits about with a fairy grace,  
And her voice is sweet as a wild bird's  
note—

Aye, sweeter you'd say if you heard her  
speak.

In the cheery way to the weary and weak.

To the weary and weak, for her life is  
passed

In scenes the saddest that one could find,  
And the many prayers that are prayed for  
her

Are breathed by the maiden and the halt  
and blind.

Some day, up in Heaven, a saint she will be;  
Now only a hospital nurse she is.

—*Harper's Bazar, in Harper's Weekly.*

## THE TORNADO.

Its Nature and Freaks Explained  
by "One Who Knows."

I have been making the Western tornado a subject of special study during the past ten years, and have been led to the following conclusions as to the nature of the meteor, leaving out of the present discussion the manner of its generation. I present these conclusions: They are not creations of accident, springing up haphazard, no one knows how or where, but they are governed by law. The grand cause of their inception, course and motion, is the law of gravity. And the trifling detail which we see on our prairies and in our roads during a summer afternoon is governed by exactly the same law as impels the frightful tornado. Since my attention has been turned to the subject I have noticed hundreds of those tiny tornadoes, and have enlisted my friends in the observation; during this time I have never seen or heard of one revolving with the hands of a clock or in this fashion:



On the contrary, their motion has invariably been the other way, or contrary to the motion of the hands of a clock, as in this manner:



There is a very simple reason for this motion; in fact, the whole mechanism of the tornado is of the simplest character when the law of gravity is applied as the key to its solution.

All its actions conform to this law. Leaving aside the discussion of its initial formation at this time, I say: The tornado springs out of a circumscribed area of high barometric pressure and moves forward in the line of least resistance or toward areas of low pressure. It never takes form and motion until past midday. It is never generated in the night time. It is never brought into action during a cloudy day or soon after a succession of cloudy days. Now, why the whirling motion contrary to the movements of the hands of a watch?

Prof. W. M. Davis, of Harvard College, in his monograph on "Whirlwinds, Cyclones and Tornadoes," says: "It is found, however, that all storms yet studied turn from right to left in the Northern Hemisphere, and from left to right in the Southern. Such constancy points to something more regular than the accidental strength of the winds, to some cause that shall always turn the eddies to the right of the center as they run in toward it in the Northern Hemisphere, and to the left in the Southern Hemisphere; and this cause is found in the rotation of the earth on its axis. There is a force arising from the earth's rotation that tends to deflect all motions in the Northern Hemisphere to the right, and this reflecting force varies with the latitude, being nothing at the equator and greatest at the poles."

There is a simpler reason and more tropical in its character. It is this: Bear in mind, the tornado comes into being only after midday, and, further, only after a succession of still, clear days; these conditions induce the following stormy status in the Northern Hemisphere:

The air to the south and east of the point of cyclonic disturbance has been more influenced by the sun's heat than any point to the north and west of it; rarification has ensued, vast columns of air have been thus lifted, and correspondingly, areas of low barometric pressure, as compared with those north and west, have been established. But the sun's influence to the south has been of several days' duration, so much so as to warrant the conclusion that this area of low pressure in this direction is a constant factor; the adventitious factor is the area of low pressure eastward caused by the sun's heat during the morning. Now, then, the first impulse of the air which goes to form the tornado will be toward the south, in the direction of the longest continuing area of low pressure, and for the same reason its next impulse will be toward the east, giving the resultant motion, as shown in this figure:



When the whirl is once established the tornado moves toward the point of least resistance.

In this section, during the cyclonic period from the 1st of June to the

middle of July, all our tornadoes come from the southwest; they come into the great basin that supplies the vast columns of heated air which rise from the bosom of the Great Lakes. This afflux to the Lakes produces a very large area of low barometric pressure.

The tornadoes which arise at other seasons move off to the Atlantic seaboard in the southeast for a like reason. I have spoken of the air which goes from the tornado. I say that the tornado is nothing more or less than a solid column of compressed air, with three powerful motions—namely: A terrible whirl, or revolution on its own axis; which, in the main, is perpendicular to the plane of its flight; an upward, screw-like motion and the motion of flight or translation. These motions are named in the order of their velocities. It is hard to estimate the velocity of this whirl; it can only be a matter of conjecture. It must be many thousands a minute. The upward, spiral motion is not near so rapid, but vastly greater than the translatory motion, which varies with the contour of the country over which it passes. The configuration of the land governs this motion entirely; retards or accelerates it, while the tornado hugs the ground; and oftentimes switches it off completely into the upper air. In this manner the rate of progression can vary from ten to one hundred miles an hour. This motion is thus erratic in its character. I know of one instance where the tornado retraced its course for a mile or more and then shot off at a right-angle to its original direction.

Now, a few words as to the character of the funnel-shaped cloud: This is only the manifestation of the crater of the solid destructive agent below. I have said that the tornado is a solid column of compressed air whirling with frightful velocity. Some idea may be obtained of its solid nature when it is remembered that several cubic miles of air are under ordinary pressure are forced into a cylinder the size of Washington's monument. It is as solid as stone. Air, by compression, gives off its acquired and latent heat. The heat, situated in the column of the tornado, produces two distinct effects. It converts the moisture wrung from the atmospheric column into steam, and throws off vast quantities of heat; this, in conjunction with the electrical phenomena developed by friction, has led many to suppose that the tornado was caused by electricity; whereas electricity is only the effect. When the pressure is removed, and the air in the column is allowed to expand, what happens? Each molecule of air is hungry for its normal quantity of latent heat, and on being released from pressure at once attacks its uncompressed neighbor, steals away and locks within itself part of its neighbor's heat. Refrigeration and condensation at once take place, and the funnel-shaped cloud is developed as the core in the crater of the tornado, and violent rain and hail-storms are bred. In one sense the funnel-shaped cloud does not pre-empt the storm. The tornado is in active operation before the funnel-shaped cloud is manifest. This cloud is harmless, and is only the evidence of the unseen, wonder-working, destructive meteor below it.

The path of the tornado proper is very narrow, and no work of man above ground has been found able to withstand the force of that whirling meteoric club within its narrow limits. The great bulk of the damage along its track is caused by the rush of air to the terrible vortex; and, strange as it may appear, most of this damage is caused by explosion. It is Nature's effort to restore and preserve the atmospheric equilibrium. With this rushing column there goes a vacuum, moving with commensurate velocity toward this vacuum all the air in the neighborhood moves. If it be confined in a house the house explodes. The safety of buildings near the track of the tornado is to have all the windows and doors—away from the approaching storm—open.

There are many phenomena that can only be explained by this rush of air to the moving vacuum, and which are otherwise inexplicable. There is no fact better attested than the one of chickens and other fowls being plucked clean of feathers during the passage of a tornado. The reason is perfectly simple and obvious. The quill of each feather contains air. This air in its movement to the vacuum carries the feather with it. While some of the freaks and works of tornadoes are of the most fantastic nature, I have seen and heard of none that can not be explained on the theory of the solidity of the moving column and the action of the law of gravity, with the added element of electricity caused by friction.—*Daniel Berry, in St. Louis Republic.*

## AN AWFUL CALAMITY.

A Helpless Old Negro Remains the Less of His Better Half.

An old negro, with an air of utter dejection, sat on a bench in front of a cabin. Some one, seeing that he must be miserable, stopped and said: "You do not seem to be enjoying yourself, old man."

"No, honey. De time fur my 'joyment' is dun ober."

"What is de matter?"

"Wife dun dead, honey."

"I am very sorry to hear that, and I assure you that you have my sympathy."

"A man loses a good friend when his wife dies."

"Dat he do, honey, dat he do. I has found dat out ter my sor', let me tell yer, an' now my good days is all gone."

"What was de matter with your wife?"

"I dunno, honey. She tuck sick one night an' she died de next ebenin'."

"Wuz er awful blow on me, fur dat 'om an wuz earnin' fifteen dollars ebry munt. It wuz awful hard fur ter die jes' arter de white folks had raised her wages."

"Feared like long ez she wucked fur twelv dollars er munt she kep' her heit, but de fifteen dollars, 'peared like, wuz too much fur her. Yes, sah, she wuz snatched off at de berry time when she wuz de most use ter me. I doan know wuz de goin' ter come o' me. I'll hab ter go ter wuck, I see afereed."

—*Arkansas Traveler.*

## A DANGEROUS JOURNEY.

A Wall Street Man's Wanderings Among Fierce African Tribes.

Mr. W. Montagu Kerr, a New Yorker and a member of the Stock Exchange, went to South Africa nearly two years ago for his health. He is an Englishman less than thirty years of age, became a member of the Stock Exchange in 1882, is a lover of hunting and expected to find great sport in the game regions of South Africa. His achievements, however, have been rather those of an explorer than of a sportsman. He has made an extensive trip northward to Central Africa, during which he journeyed among tribes notorious for their power and fierceness, who have seldom been visited by white men. He employed a lot of blacks as porters and attendants, and first made his way north to Matabeleland, which is inhabited by Zulus, who left their country in a body many years ago, drove the inhabitants out of Matabeleland, and have since been the terror of the surrounding tribes. Within the past three years a few Roman Catholic missionaries have been permitted by Lobengula, their powerful chief, to settle in the country, and they are the only white men there.

Mr. Kerr found Lobengula to be intellectually far above his people, who hold him in great awe. Last summer, after Mr. Kerr left Matabeleland, Lobengula took his six thousand warriors on the war path again. Their fear of this savage chief was one of the reasons that induced the chiefs of Bechuanaland, further west, a few months ago, to accept the proffered British protectorate. Mr. Kerr went toward the Zambesi, traveling far east of the route usually followed by white travelers. He found a great deal of game and had much sport, though he was among tribes who were little acquainted with white men, and it was uncertain from day to day how the next tribe would receive him. One night he learned from a woman that on the following night his entire party was to be killed. He struck camp and made a forced march of forty miles. Two or three times his porters deserted him, and he had to obtain a new supply from friendly tribes. He crossed the Zambesi and pushed north through a country that had not previously been visited by a white man. At last he came to the territory of the famous Mangones, on the great plateau west of Lake Nyassa.

This tribe, whom Livingstone and several other explorers described, have desolated a large part of East Africa. They, like the Matabeles, are emigrants from Zululand. They travel several hundreds of miles on slave raids and cattle stealing expeditions. Many mountains east of Nyassa are dotted with the huts of natives, who have left the valleys to escape the Mangone raids. Mr. Kerr confirms what has been reported about the revival of the slave trade on the east coast. He says it was no uncommon sight to see in the Mangone villages slave gongs sitting in yokes ready for the completion of the caravan with which they were to proceed to the coast. They had been bought by Arab dealers from the Mangones.

Mr. Kerr then went east to the foot of Lake Nyassa, where he saw the ruins of Livingstone's, the pretty mission town, which was so unhealthy that it was deserted two years ago by the missionaries, who are now prospering at Bandawe, a salubrious place, 100 miles further north. Here Mr. Kerr's last lot of porters deserted him, and left him with little food and no means of getting assistance. He was reduced to great straits when, sixteen days after he reached the lake, the little missionary steamboat that plies on Lake Nyassa, arrived with M. Giraud, the French explorer, who was homeward bound. Mr. Kerr joined the young ensign. They had splendid sport floating down the Shire River to the sea, such big game as elephants, buffaloes, hippopotami, and many kinds of antelopes falling to their rifles.

From Quillimane Mr. Kerr returned to Cape Town. In all his wanderings, lasting over a year, he did not have a touch of fever until he reached Quillimane, one of the most unhealthy spots on the East Coast.

Mr. Kerr brought with him gold dust and gold-bearing quartz from the region south of the Zambesi, where the Portuguese mined extensively two centuries ago. He also found coal of good quality north of Zambesi.—*N. Y. Sun.*

## A CONSIDERATE DAUGHTER.

Why She Didn't Want Her Lover to See Much of Her Mother.

Sam Holbry, a wealthy young man, has been paying marked attention to Miss Birdie McGinnis. Mrs. McGinnis, the mother of Birdie, is an immensely stout woman. A few evenings ago Mr. Holbry was expected to call. Just before the hour appointed for his arrival Birdie said to her mother:

"Mother, dear, will you do me one favor?"

"What is it, dear?"

"You know that daughters always grow up to resemble their mothers."

"Well, my dear?"

"Well, now, just look at yourself in the glass. You look as big as one of these water-tanks. You know you weigh one hundred and sixty-nine pounds."

"Well, what is it, my daughter?"

"Please, stay in your room. Don't let Mr. Holbry see you. I don't want him to see much of you."

"Why so, my daughter?"

"Because, ma, I've nearly got him corralled. He is a little skittish, but I'll have him roped in pretty soon; but if he should see you he'll think that I'll be as big as you some of these days, and he'll jump the fence, sure. I tell you, just wait until we are married, and then you can come and live with us, but don't scare him off just at this crisis."

—*Texas Siftings.*

"I threw my love to him and it hath gone astray," sings Lillie Drake in an exchange. Let Lillie be comforted by the reflection that a woman never could throw anything straight.—*Chicago Journal.*

"If you can not convince others by reason, it is a losing game to hunt up a club for the purpose."

## THE OPEN RATE.

Before the snapping, glowing grate,  
We sit, my wife and I together,  
And happy in our tete-a-tete,  
Defy this dull November weather.

There's nothing like a blazing fire  
To make a man feel blithe and jolly,  
To raise his drooping spirits higher  
And drive away his melancholy.

And we enjoy, my wife and I,  
Our cheery fire when darkness hovers,  
And while the cold winds moan and sigh  
We sit there like a pair of lovers.

I sometimes think that there must be  
Some subtle witchery about it,  
But this I know, I can not see  
How we could ever do without it.

So every night it's lighted now,  
For this we both of us have willed it,  
To settle which of us shall build it,  
—*Somerville Journal.*

## A TALE IN THREE CHAPTERS.

[Cleveland Leader.]



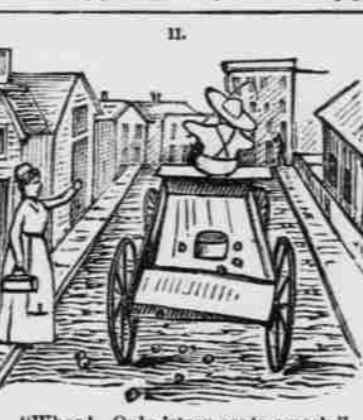
"Apples, apples, apples!"

## A SMOKING MINISTER.

Two Good Stories of a Quick-Witted Methodist Minister.

Rev. C. D. Bunn is a remarkably eloquent and witty member of one of the New England Conferences of the Methodist Episcopal Church. He has a peculiar drawl, which adds much to the mirth-provoking character of his sayings. He is, withal, exceedingly bald and much addicted to smoking. When he preached in—the young men of his acquaintance used to chaff him a great deal, for the sake of drawing him out. One day he was asked how it happened that some men grew very bald so early an age, while others were well covered. "Well," said he, "some people's heads run to hair and some to brains."

At the Northport camp-meeting one day a brother was talking about in the woods, meditating upon a sermon, when he saw smoke curling up from the roots of a large tree that had been leveled by a storm. Mooting the trunk he crept cautiously along and peeped over the end. There sat Brother B., pulling away at a T. D. pipe.



"Whoa! Only 'steen cents a peck."

The good brother was very much shocked, and hailed him with:

"Hello, Brother Bunn! Are you offering incense to the devil?"

Brother Bunn slowly lifted his eyes to the intruder's face, settled back into his old position and drawled out:

"Yes, but I didn't know he was so near."

—*Detroit Free Press.*

## ONE PRICE ONLY.

"Schentlemens, schoot walk in and look at dose vintor goots."

"How much is dis overcoat?"

"Twenty tollars for dot overcoat, and dot was making you a bresent of dot overcoat."

"That's too high."

"I dells you, Mishter Gilhooly, I have only vintor, I never dresed. Choost read dot sign on der rail 'Fixed Price'."

"O, that means you fix de prices to suit yourself. Twenty tollars is too much."

"I believe you heard me ven I tole you I had only vintor price, twenty tollars."

"It's not vintor seven and a half."

Mose Schamburg, eagerly: "Vill ye give dot?"—*Texas Siftings.*



"I I I O O O [ ] Well, by gosh!"

## NOT FAMILIAR WITH THEM.

Miss Clara—Can you call the names of the different stars and constellations, Mr. Featherby?

Featherby—Oh, yes. There is the north star and the evening star and the Great Bear and the Little Dipper and the Milky Way, and all the rest. Oh, yes.

Miss Clara—The Great Bear is called Ursa Major, is it not?

Featherby—Oh, you mean do I know botanical names? I am ashamed to confess I do not.—*N. Y. Times.*

## THE AMENITIES OF LIFE.

"You are a liar, sir."

"You are a gentleman."

"Ah!" returned the first speaker, mollified. "I was mistaken. Please accept my apology."

"Don't mention it," replied the other, curtly. "I was mistaken, too."—*N. Y. Graphic.*

## PITH AND POINT.

—They are making the new styles of collars so high that before long young men will have to stand on tip toes to see any thing at all.—*N. Y. Graphic.*

—The base-ball man's salary is henceforth to be not over \$2,000. We fear only men with common-school educations can be obtained for this sum.—*Boston Post.*

—According to a correspondent "the Princess Louise of England writes very well." This is encouraging. We trust she reads, too. After a while we may expect to find Princesses almost as well educated as other people.—*Chicago Inter-Ocean.*

—The United States has nearly three times as many doctors as England and nearly four times as many as France in proportion to the population. Does this redundancy of doctors in the United States account for the small proportion of the population?—*Boston Transcript.*

—At a social gathering on Austin avenue, Rochester, McGinnis, who is a great wag, said to Miss Esmeralda Longcoffin: "You would not believe, Miss Esmeralda, what conquests I've made among the fair sex. You would not believe it." "I don't," replied Miss Esmeralda.—*Texas Siftings.*

—Humanity owes at least one little debt of gratitude to Emil Zola. When he was poor he used to catch English sparrows and eat them. Now, any man who will come to America and eat English sparrows can secure steady employment at good wages and will be hailed as a public benefactor.—*Brooklyn Eagle.*

—Hostess: "Oh! Mme. Zuchetti, let me introduce my friend, Major Enderby. He is most anxious to know you." The Major: "Believe me, madame, this is an honor I have long looked forward to. I remember listening with rapture to your 'Marguerite' when I was a mere boy." His acquaintance with Mme. Zuchetti never got any further.—*Puck.*

—My dear fellow," says an Indiana Sheriff to his prisoner, "I must apologize to you for the sanitary condition of this jail. Several of the prisoners are down with the measles, but I assure you that it is not my fault. 'Oh, no excuses,' replies the prisoner. 'It was my intention to break out as soon as possible, any way.'—*N. Y. Sun.*

—Athletic Note: "There is a man on our street afflicted with a bad case of the foot-and-mouth disease," remarked Ebenezer Jones to a young physician of his acquaintance. "Impossible!" said the young doctor. "I never heard of a human being taking that disease." "But he has it, undoubtedly." "What are the symptoms?" "Why, he thinks he is a champion pedestrian, and he is always talking about it."—*Pittsburgh Chronicle.*

—Important Information: A professor at the University of Texas was explaining some of the habits and customs of the ancient Greeks to his class. "The ancient Greeks built no roof over their theaters," said the professor. "What did the ancient Greeks do when it rained?" asked Johnny Fizzlepop. The professor took off his spectacles, polished them with his handkerchief, and replied calmly: "They got wet, I suppose."—*Texas Siftings.*

## THE JUDGE CAVED.

An Experience With a Colored Representative of the Law.

As we rode out from a town in Mississippi to view a plantation a commercial traveler for a New York house expressed a desire to go along. He procured a horse and joined the party, and his company was welcomed. A mile and a half from town we came to a notice, posted on a board, and everybody stopped to read it. It was a notice of Sheriff's sale, and the colored man who tackled it up was still on the ground. The notice was badly written and worse spelled, and the drummer laughed long and loud over "caf" for calf, "det" for debt, and "sherut" for Sheriff.

"What's wrong wid dat notice?" asked the colored man in a very edgy voice.

"It's too funny for anything," was the reply. "Some one had better go to school."

"Dat's me, sah. I'm a Constable an' I writ dat off."

"Oh, you did? Well, I hope de c-a-f will be sold."

"Yes, sah. You come along wid me, sah."

"With you?"

"Yes, sah. I rest you, sah!"

"What for?"

"Contempt of court, sah! Come right along."

"Where?"

"Befo' de Justiss, sah! We'll see about dat c-a-f!"

The drummer was advised against resistance and finally permitted himself to be taken before a colored justice nearly two miles from the spot. The Constable had picked up a colored man on the way, who made and swore to a complaint, and the drummer was duly arraigned on the charge, although his Honor seemed very uneasy about it. The colored acted as counsel for the prisoner. When the case was ready he said:

"Your Honor, who is this court?"

"Is sah," was the dignified reply.

"Has this man shown any contempt for you?"

"No, sah."

"Then how can you try him for contempt of court?"

The old man scratched his head, opened a law book wrong side up, and finally replied:

"De prisoner am discharged, but will hev to pay one dollar costs."

"But if he is discharged because of his innocence, where do you get the right to put costs onto him?" asked the colored.

"Where do I? Why, in de law-book."

"Which one?"

"De one at home."

"I take exceptions, your Honor, and shall carry this case to the Supreme Court," said the colored.

"Umph! Dat alters de case. De prisoner am discharged from his fine of one dollar, an' de constable am fined two dollars for making a fool of himself an' gettin' dis court all twisted up in a hard knot afore white folks!"—*Detroit Free Press.*

## READING FOR THE YOUNG.

### A PLACE FOR YOU.

Some day, my boy, you'll be a man,  
Compelled to face the world alone;  
Your own career you'll have to plan,  
And work out, too, and by your own  
Exertions gain what'er you covet  
Will ever gather round your name;  
And if you lose life's waiting crown,  
Yours is the blame.

The impress of each sunny hour  
On life's great after-work you'll see;  
You'll see it yours, and yours the power  
To make or mar your destiny.  
How? By the way you use these hours:  
Now store your mind and nerve your heart,  
Training the while those latent powers  
To do their part.

Within the world, my boy, somewhere  
There is a place made just for you;  
Your future battle-ground is there,  
And there is work for you to do;  
Perhaps it is to sell the grain,  
Perhaps to sow, may be to grind—  
Just think awhile—your quickened brain  
Your place will find.

And be it high or be it low,  
No matter where you find your post,  
Oh, stick to it, my lad, and show  
Your mettle, while you make the most  
Of your fair hour. Less to be said  
Your place with honor. Know always  
To do your work, and do it well,  
Is highest praise.

—*Golden Days.*

### "JUMBO."

Personal Reminiscences by His Keeper, Matthew Scott.

The following interesting sketch of Barnum's mammoth elephant, which met such a tragic death in Canada last summer, is taken from an article in a late number of *Harper's Young People*: "It was in December, 1851, that my name was entered on the books of the Royal Zoological Society's Garden, at Regent's Park, in London. I was then seventeen years of age, and my great desire to be constantly among the animals which I had visited over and over again was finally gratified.

"I well remember when it was announced, eighteen years ago, that an African elephant, with immense ears like folding parlor doors, would soon arrive, and the managers decided to put me in charge of him. There was great excitement when the boat arrived from Paris, and it seemed as if all the boys and girls in London turned out to see him. The little elephant was a curiosity on account of his peculiar shape and his big ears, and the members of several learned societies came to examine him. The name I gave him, Jumbo, had no particular significance; in fact, I don't think that I had ever heard it.

"From the natives where he was captured it was learned that Jumbo was five years of age, and I took delight in telling the visitors that he would grow up to be the biggest elephant in the world. This I judged from the peculiar size and proportions of his bones in relation to the body, and I resolved soon afterward that I would make a study of feeding him. He was then sickly, and in a bad state of health generally. Jumbo and myself were fast friends the first time we met, and he would be governed by none of the other keepers. He was like a great good-natured boy, and he took a special fancy to children and ladies, and never so happy as when he could carry a back-load of little ones around the Park. His passengers included children of royalty and nobility, and as he grew rapidly, a larger saddle was necessary every few months.

"One day as Jumbo was passing through a crowd he suddenly stopped, and would not move an inch when I commanded him to proceed. From my seat in the saddle I observed that a lady below was